



COLORADO SPRINGS,
COLORADO

MAY 1994

Hamfest!

21 May 8 AM

Liberty High School



Pikes Peak Radio Amateur Association, Inc.
P. O. Box 16521
Colorado Springs, Colorado 80935

FIRST CLASS MAIL



Ø BEAT



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President--	Steve Westby	WB7VHR	1540 Keith Dr.	80916	670-1070
Vice-President--	Al Vrooman	NØCMW	1341 Diana Ln.	80903	473-1660
Secretary--	Ken Phillips	NØNKP	4850 Sanflago Way	80917	674-6368
Treasurer--	Thomas McDaniel	NØNTX	4255 Shining Way	80916	670-1465
Board Member--	Ora Marie Rose	NØQJX	5214 Colter Lane	80916	691-5768
Board Member--	Malcolm Benton	KESS	16385 Deby Drive	80921	488-2071
Board Member--	Liz Deutsch	NØTUK	4305 Ridgelane Dr.	80918	693-8352
Board Member--	Steve Schaarschmidt	KØCI	6155 Tuckerman Ln.	80918	698-3554
Past President--	Luci Stansberry	NØOUD	2630 E. Uintah	80918	636-1290
Ø-Beat Editor--	Ron Deutsch	NKØP	4305 Ridgelane Dr.	80918	693-8352

ZERO BEAT is published monthly in the interest of the members of the Pikes Peak Radio Amateur Association, Inc., PO Box 16521, Colorado Springs, Colorado 80935. For membership and subscription information see last page of this publication. The Pikes Peak Radio Amateur Association meets monthly on the second Wednesday of each month at the Disabled American Veterans, Chapter 26, 6880 Palmer Park Blvd. at 7PM.

EDITOR: Ron Deutsch, NKØP, 4305 Ridgelane Drive, Colorado Springs, Colorado 80918 (719)593-8352

Deadline for submission of articles or ads is the 21st of each month. Submissions may be sent to the Editor or to the club PO box. Permission to reprint articles is granted provided credit is given to both the author and this publication.

ADVERTISING RATES: Full page \$48; half page \$24; quarter page \$12; business card \$6. These are monthly rates and are billed quarterly. Send your ad requests and payments to: PPRAA, PO Box 16521, Colorado Springs, Colorado 80935.

Prunella's Corner

I just want to say "so long" until Autumn. Classes will finish at the end of May. Franklin and I will not be teaching during the Summer Session this year because we will be on what human people call a "honeymoon". Franklin and I will be visiting friends in many parts of the world. Traveling is much easier for Mumlops than it is for human people. We do not have to have things like visas, because we really have no political borders. Mumlops don't understand why human people bother with borders and things like ethnic differences. Maybe human people will eventually find out how much fun life can be when such superficial things are not taken seriously. Then you will have the time to simply enjoy each other's company.

Franklin and I hope that all the members of the Pikes Peak Radio Amateur Association have a wonderful Spring and Summer. We know that many of you will be busy with public service communications. We hope you will remember to bring food donations for the DAV pantry when you attend the monthly meetings. You can get a free raffle ticket if you bring a donation.

Franklin and I will tell you all about our trip when we return in Autumn.

Ta Ta
Miss Prunella, Ph.D.



VE Testing

Rick Brown - KDØSU

VE Testing is sponsored by the PPRAA on the 2nd Saturday of February, April, June, August, October and December. Testing takes place at 9:00 AM at:

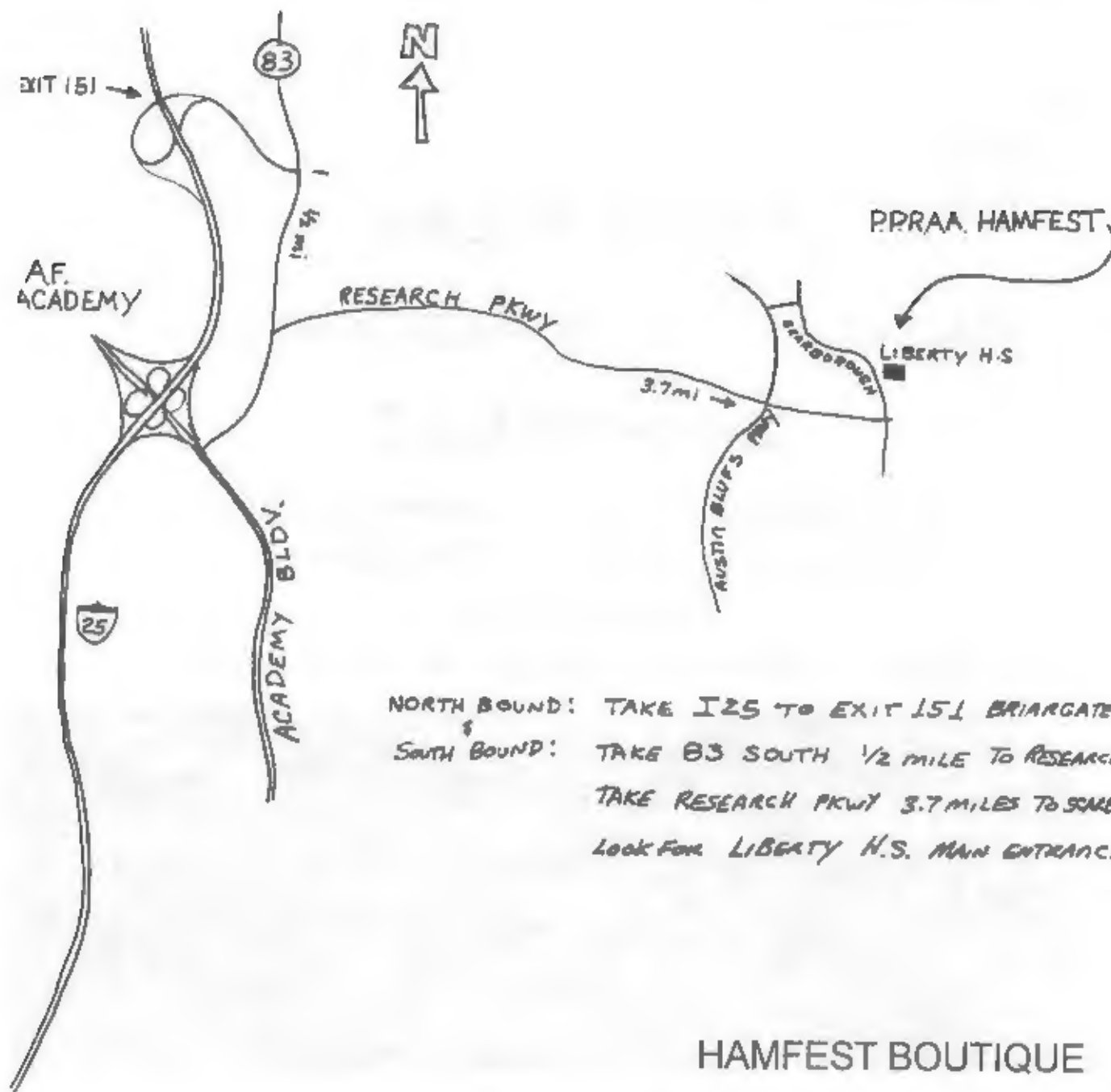
Denver Technical College (DTC)
225 South Union
Colorado Springs

While we prefer pre registration, walk-ins are accepted on a space available basis. As a reminder to anyone wishing to take an examination you should bring the follow items.

1. \$5.75 (preferably a check made out to ARRL/VEC) for all exams other than elements 1A or 2.
2. Picture Identification
3. A copy of your current amateur license as well as the signed original, or a copy of any examination credit you have.
4. Pen, pencils, and a calculator if you need one.

To pre register, or if you have any questions, please call me at 531-9423. Please do not call DTC, they only provide us the place, and do not have any of the information about testing.





NORTH BOUND: TAKE I25 TO EXIT 151 BRIARGATE PKWY

SOUTH BOUND: TAKE 83 SOUTH 1/2 MILE TO RESEARCH PKWY
 TAKE RESEARCH PKWY 3.7 MILES TO SMC
 LOOK FOR LIBERTY H.S. MAIN ENTRANCE

HAMFEST BOUTIQUE

Here it is May and only a few more days until the big day "Swapfest". and one last request for donations for the Boutique table, the success of the table depends on the generosity of our members and their families. We want to thank those that have donated craft items for the table.

Charla XYL of Frank NØIEM donated a beautiful afghan to be raffled off at the swapfest so don't forget to buy your tickets for that also.

Contact either Faye KBØQI at 632-4574, or Connie KAØPXE at 634-1081. Items can be brought to the club meetings, or call for us to pickup, or where they can be dropped off.

Boutique committee

Thank You From NØLA

During my recent heart attack your cards, telephone calls and offers of help were greatly appreciated.

It is heartening to know that we are part of such a caring and thoughtful group.

Thanks again Pete NØLA

Swapfest Update

Things are looking good for an exiting time at the Hamfest May 21st. Besides the main prizes we will be giving away nearly \$2,000 worth of hourly prizes.

We'll start the hourly drawings at 9am. Our esteemed PPRAA president, WB7VHR, Steve is back by popular request to MC the drawings. We'll draw names each hour and let people have a choice of an assortment of prizes. Those prizes not claimed by 1pm will be drawn for at that time. If you can't remain for all the drawings it is permissible for you to have some one else select a hourly prize for you, just leave them the other half of your ticket.

All ticket stubs WILL BE in the barrel for the 2pm grand prize drawing. Winner of either grand prize...the Kenwood TS 50 or the TH22 need not be present to win.

All profits from the raffle benefit our club so lets fill up that fancy gold looking barrel.

Any questions or to volunteer to help out at the raffle table contact me.

WAØMNL, Rosie 471-9965

Daily Traffic Nets

As a followup to Jeff Ryan's (NØWPA) March 1994 program on Traffic Handling, here's a list of a few traffic nets you might like to check out:

Southern Colorado Traffic Net
(National Traffic System Local Net)
146.97 Mhz FM (PPFMA repeater)
Off DST: 8:00 pm MST 0300 UTC
On DST: 8:00 pm MDT 0200 UTC

Colorado-Wyoming Net
National Traffic System Section Net
3715 Khz CW
Off DST: 7:30 pm MST 0200 UTC

On DST: 7:30 pm MDT 0130 UTC
Columbine Net
3989 Khz LSB
Off DST: 7:00 pm MST 0200 UTC
On DST: 8:00 pm MDT 0200 UTC

Southern Traffic Net
3935 Khz
Off DST 8:30 pm MST 0330 UTC
On DST: 8:30 pm MDT 0230 UTC

Submitted by Steve KØCI

Dits and Bits

For Sale:

Heathkit SB-104 100 Watt SSB-CW w/desk mic. \$250 Steve WB7VHR 570-1070

PPRAA Board Meeting April 18, 1994

The Board of Directors of the PPRAA met at the home of Luci, NØOUD at 7pm on April 18, 1994. The following members and guests were in attendance:

NØOUD, Luci; NØQJX, Ora; NKØP, Ron;
NØTUK, Liz; KE9S, Malcolm; NØNTX, Tom;
NØCMW, Al; WB7VHR, Steve; KØTER, Mike;
NØYTQ, Kathie; NØOCZ, Mike.

The club's electric typewriter will be transferred to the Treasurer, Tom for use in typing club reports to the state.

May program will be Jim Maxwell talking about Hydrology. (Continuation of severe weather training)

May will be NKØP's last month doing Zero Beat. Chris, NXØE has volunteered to do the June issue. Kathie NØYTQ and Mike NØOCZ will be looking over the operation and may be willing to take it over by July 1994.

The Club's books have been reviewed and certified correct.

A check for \$230.21 will be sent to Al Baily for previously approved Education Committee expenses.

continued on page 8

May 1994

PIKES PEAK RADIO AMATEUR ASSOCIATION

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 8:00am COLORADO ARES NETS 3928.0 6:30pm RACES HF NET 3990.5 8:00pm SCTN 146. 97	2 8:00pm SCTN 146. 97	3 7:00pm ARES NET 146.97 7:30pm RACES NET 146.97 8:00pm SCTN 146. 97	4 8:00pm SCTN 146. 97	5 7:30pm CMRG Info Net 147.345 8:00pm SCTN 146. 97	6 8:00pm SCTN 146. 97	7 7:00am Village Inn Breakfast 7:30am Breakfast Country Kitchen Widefield (W2TIO) 8:00pm SCTN 146. 97
8 8:00am COLORADO ARES NETS 3928.0 6:30pm RACES HF NET 3990.5 8:00pm SCTN 146. 97	9 8:00pm SCTN 146. 97	10 7:00pm ARES NET 146.97 7:30pm RACES NET 146.97 8:00pm SCTN 146. 97	11 7:00pm PPRAA Meeting DAV Center "Hydrology" 8:00pm SCTN 146. 97	12 CMRG Info Net 147.345 8:00pm SCTN 146. 97	13 8:00pm SCTN 146. 97	14 7:00am Village Inn Breakfast 7:30am Breakfast Country Kitchen Widefield (W2TIO) 8:00am SkyWarn Class 8:00pm SCTN 146.97
15 8:00am COLORADO ARES NETS 3928.0 8:00am SkyWarn Class Gold Hill P.S. 6:30pm RACES HF NET 3990.5 8:00pm SCTN 146.97	16 0-BEAT DEADLINE 7:00pm PPRAA Board Meeting (WB7VHR) 8:00pm SCTN 146. 97	17 7:00pm ARES NET 146.97 7:30pm RACES NET 146.97 8:00pm SCTN 146. 97	18 7:00pm MARC Meeting Woodland Park 8:00pm SCTN 146. 97	19 7:30pm CMRG Info Net 147.345 8:00pm SCTN 146. 97	20 8:00pm SCTN 146. 97	21 7:00am Village Inn Breakfast 7:30am Breakfast Country Kitchen Widefield (W2TIO) 8:00am PPRAA SWAPFEST 8:00pm SCTN 146.97
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June 1994

PIKES PEAK RADIO AMATEUR ASSOCIATION

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

			1 8:00pm SCTN 146.97	2 7:30pm CMRG Info Net 147.345 8:00pm SCTN 146.97	3 8:00pm SCTN 146.97	4 7:00am Village Inn Breakfast 7:30am Breakfast Country Kitchen Widefield (W2TJO) 8:00pm SCTN 146.97
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12 8:00am COLORADO ARES NETS 3928.0 6:30pm RACES HF NET 3990.5 8:00pm SCTN 146.97	13 8:00pm SCTN 146.97	14 7:00pm ARES NET 146.97 7:30pm RACES NET 146.97 8:00pm SCTN 146.97	15 7:00pm MARC Meeting Woodland Park 8:00pm SCTN 146.97	16 7:30pm CMRG Info Net 147.345 8:00pm SCTN 146.97	17 8:00pm SCTN 146.97	18 7:00am Village Inn Breakfast 7:30am Breakfast Country Kitchen Widefield (W2TJO) 8:00pm SCTN 146.97
19 8:00am COLORADO ARES NETS 3928.0 6:30pm RACES HF NET 3990.5 8:00pm SCTN 146.97	20 0-BEAT DEADLINE 8:00pm SCTN 146.97	21 7:00pm ARES NET 146.97 7:30pm RACES NET 146.97 8:00pm SCTN 146.97	22 8:00pm SCTN 146.97	23 7:30pm CMRG Info Net 147.345 8:00pm SCTN 146.97	24 8:00pm SCTN 146.97	25 Tour de Cure 7:00am Village Inn Breakfast 7:30am Breakfast Country Kitchen Widefield (W2TJO) 8:00pm SCTN 146.97 Field Day @ Air...
26 8:00am COLORADO ARES NETS 3928.0 6:30pm RACES HF NET 3990.5 8:00pm SCTN 146.97 Field Day @ Air...	27 8:00pm SCTN 146.97	28 7:00pm ARES NET 146.97 7:30pm RACES NET 146.97 8:00pm SCTN 146.97	29 8:00pm SCTN 146.97	30 7:30pm CMRG Info Net 147.345 8:00pm SCTN 146.97		

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July

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24	25	26	27	28	29	30
31						

MONTHLY EVENT CALENDAR

4/26/1994

from page 5

East Library show has been approved for this year with Al, N2IWZ heading it up again. The exact date is still under discussion.

The Club Picnic will be on August 21, 1994 at the USAF Academy Picnic grounds. The Prize will be the Radio Shack 2mtr HT.

Rob Rollor, WB7WHT is interested in an education program for schools and is looking for volunteers.

The meeting was adjourned at 7:45 pm.

Submitted by Ron, NKØP Substituting for Ken NØNKP.

General Meeting April 13, 1994

Treasurers Report

Previous Balance 1245.09

Income 390.69

Expenses 839.59

New Balance 996.19

The meeting was called to order at 7:00 PM by Steve WB7VHR. The treasurers report was submitted. The minutes were approved as published in *0 Beat*.

VE Testing chairman, Rick Brown, KDØSU, Requested people register for the next test session at 09:00, with testing to start at 10:00.

CCARC: Oak KØROL reported on the March meeting held in Parker. The Boulder tower ordinance was upheld against hams in that area. The council purchased an Icom ICR7100 to better monitor repeater activity.

Public Service: Mike, KØTER was finalizing plans to support the walk for children on April 23rd. He announced plans to participate in the MS150 bike event from Highlands Ranch to Royal Gorge on July 9th and 10th, as well as the Pikes Peak Hill Climb on the 4th of July. He also announce that

Field Day will be on July 24, 25, & 26 at the USAFA family camping area. For more information listen up on the 146.970 repeater at 7:00 PM for the ARES net or Contact Mike or Luci NØOD.

Hammy was awarded to Gloria Ryan NØZFX in recognition of her efforts in supporting the swapfest raffle.

Swapfest chairman Harv, WA3EIB says the swapfest is progressing well. We have 3,000 fliers on the street, and we have over \$2,000.00 in **DOOR PRIZES** alone. This does not count the raffle drawing for the HF and HT grand prizes. **Good job Rosie!**

The treasurers books were reviewed by an accountant who is one of our new club members, Kathleen, N9TMD, and Tammy Phillips of the Institute of Management Accountants and they found no errors. Thanks goes out to our treasurer, Tom NØNTX.

Ken, NØNKP suggested older hams seek to train newer hams in the things they do for the club such as committee positions, and board positions. He suggested new hams let their desire to participate be known.

The program was given by Mike Silva with his terrific photos of severe weather phenomenon and tornadoes. Next months program will be given by Jim Maxwell on hydrology.

Submitted by Ken NØNKP

Committee Chairpersons, etc.

Publicity	Al Craig	584-9288
Membership	Les Borst	634-3995
Education	Al Bailey	597-8514
VE Testing	Rick Brown	531-9423
Interference	Bill Petty	591-2116
RACES	Doug Moloney	unlisted
ARES	John Chapman	635-1604
Skywarn	Steve Westby	570-1070
Public Service	Mike Stansberry	636-1290
CCARC	Oak Stockton	570-7782
Club Trailer	Harry Russell	
Newsletter	Ron Deutsch	593-8352
Club Historian	Al Craig	594-9288
Falcon Wanderers	Bob Nyman	574-5161
Programs	Steve Shaarschmidt	598-3554
Swapfest	Harvey Hunter	597-8964
Christmas Party	Susan Smith	495-0624

Digital Signal Processing on a Budget
RADIO SHACK DSP40
by
Jim Sorrells WA9ABB

Over the years, I have tried many different audio filters in an attempt to improve some otherwise poor to mediocre receivers. These have ranged from simple passive LC circuits, to active IC circuits, to rather expensive DSP(digital signal processing) units.

Radio Shack has just released the DSP40. This is a relatively inexpensive DSP device (\$79) compared to others on the market. This small black box (1 15/16 x 4 9/16 x 7 1/16 inches) performs much better than expected. On a cost per performance ratio, the DSP40 is a bargain. The controls are simple to operate. There are three modes - CW, SSB, and NR, and three bandwidths - wide, medium, and narrow. It includes a built in speaker with good audio output. The volume control also serves as the on-off switch, and there is a separate switch to bypass the unit if desired. The DSP40 requires 12v for operation. A power cord is provided. A 1/4 inch headphone jack is present on the front panel, and a 1/8 inch speaker jack is present on the back. Audio output from the headphone jack is weak. On the other hand, output from the speaker jack is quite good and works much better with headphones. The accompanying manual is a bit skimpy. It does not include a schematic and does not completely describe the notch filtering capabilities. Fortunately the DSP40 is easy to operate even without reading the manual.

I have used the DSP40 with a Kenwood TS850 and with an inexpensive shortwave receiver. It made a dramatic improvement with the shortwave receiver and a bit less in the TS850 with its extra crystal filters. The DSP40 has limits and will not make every weak signal readable, but it does help in many cases. It has a notch filter which seems to magically eliminate carriers and heterodynes in the SSB and NR mode. There is only a subtle audio difference in SSB signals in the the SSB and NR modes. They both reduce adjacent channel "monkey chatter" and background noise that contribute to operator fatigue. The CW mode is very effective in selecting one signal from several others. This filter is not designed for the digital modes (rtty, packet, amtor, pactor). The DSP40 also includes a mobile bracket. With its small size and simple operation, it should be an asset in mobile as well as fixed station service.

The DSP40 does not perform quite as well as the JPS NIR10 filter, but the NIR10 costs four times as much. The DSP40 is a set and forget system. The NIR10 requires tuning and tweeking for optimum performance. The DSP40 will definitely enhance receivers needing extra selectivity and noise reduction, but may not be of much benefit to a newer top of the line rig with multiple crystal filters. It is cheaper and easier than adding extra crystal filters to an older rig. On a scale of 1 to 10 I rate it an 8.

F O R S A L E

		<u>Purchase Date</u>
<u>1</u>	YEASU Transceiver FT 890AT, modified for MARS' w/26' coax & mast, #21120716	March 19,'93
1	Cushcraft Antenna R-7 HF	March 19,'93
1	MFJ Tuner 941E w/lamp & coax	July 6,'93
1	MFJ Mic.Switch HF/FM for Tnc & coax	Sept.2,'93
1	MFJ 249 SWR Analyzer - All Bands	July 6,'93
1	AEA Tnc 232 MBX with all cables (HF/FM) Packet	July 2,'93
1	Palamar SWR/Power Meter w/cable (HF) led indicated	July 2,'93
1	Homebrew 80M HF Antenna w/14 twisted gauge wire, standoffs = 1:1 balun	March 15,'94
4	Coax Antenna & Pigtails w/PL259 connections, 2' - 5' - 10' - 36'	Dec., '93
1	Packard-Bell Computer 3865X-11 with colored monitor, all cables, mouse, pad, some disks & 2 file boxes (FM/HF)	Jan.2,'92
1	Printer, Epson #3000 with approx. 4" of stacked paper	Jan.2,'92

Note: All equipment has the factory shipping cases, complete installation and operating instructions. It has been used very little .. like new. Retail cost today is \$4,222.00 -- will discount 25% - \$3,167.00 firm. Sold as a package only.

All equipment is neatly installed in special furniture cabinets. Very low SWRs with Tuner.

TERMS

Cash - \$3,167.00

or

\$491.75 down, Bal. Visa/Master Card.

or

\$491.75 down, Bal. on a promissory note with recourse incl. 8% interest, payable at \$200.00 or more per month .. all due and payable within 12 months. Notarized financial statement required at time of transaction.

Call for appointment to test it - with KA6AHY .. John ..
(719) 635-3778.

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Ø-Beat Changes Editor

by Ron Deutsch, NØØP

The May issue of Ø-Beat will be my last issue as Editor. I want to thank all who have helped me put out this newsletter week after week. Special thanks to Al, NØCMW who spent nearly every Friday for the past 5 years stapling, folding, and labeling the newsletter. (We wore out 2 staplers!) Also thanks to Chris, NXØE who gave me a much needed break the past few summers and will be pitching in one more time to put out the June issue while I am on vacation. Thanks to Ken, NØNKP who spent many hours helping me with learning new software and printing the newsletter on his laser printer. Thanks to my XYL, NØTUK for putting up with my complaining and and typing in articles and contributing articles even before she was licensed!

Finally, thanks to all who contributed articles and advice over the years. The newsletter would be a sterile rag without the thoughtful articles by members.

It has been a constant learning experience making changes and learning about desktop publishing. It has been both fun and frustrating, difficult and simple. And, as with all things there comes a time to make a change. I hope each of you give the new Editor the same support and encouragement you have given me over the years. Thanks again to everyone who helped make this a functional paper that met the needs of the PPRAA and provided information and entertainment to the Hams of the Pikes Peak area.

Reminder! This is the members' newsletter. Should you see, or hear, or read something you think would interest others, send it in!

Membership Application Pikes Peak Radio Amateur Association, INC.

P.O. Box 16521
Colorado Springs, Colorado 80935

Date _____

Name _____

Address _____

City _____ State _____ Zip _____

Call _____ License Class _____ Telephone _____

Are you an ARRL member? Yes _____ No _____

One year membership rates. (Year starts with the month you receive your first issue.)

Full Member \$15.00 _____ Family Membership (same address) \$18.00 _____

Over 65 \$12.00 _____ Family Both over 65 \$12.00 _____

Associate (outside El Paso or Teller Co.) \$12.00 _____ Newsletter only \$12.00 _____

Additional Names: _____ Call _____ Class _____

IF THIS IS A RENEWAL PLEASE CHECK HERE: _____

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